

### **AMENDMENTS TO THE CLAIMS**

Please amend the claims as indicated below. The language being added is underlined (“  ”) and the language being deleted contains either a strikethrough (“”) or is enclosed by double brackets (“[[]]”).

#### **LISTING OF CLAIMS**

1. (Currently Amended) A method for reducing interference due to handshake tones in the frequency domain, the method comprising the steps of:

receiving an input signal in the frequency domain having a short correlation time component and a long correlation time component;

generating a delayed signal by delaying the input signal by a delay value;

generating a prediction signal based at least in part on the delayed signal;

comparing the input signal and the prediction signal; and

~~minimizing~~ reducing a variance between the input signal and the prediction signal.

2. (Currently Amended) The method of claim 1, wherein the input signal is a corrupted frequency domain ~~[[ADSL]]~~Asymmetric Digital Subscriber Line (ADSL) signal at a predetermined bin of a predetermined time-symbol.

3. (Original) The method of claim 1, wherein the delay value is a time-symbol value.

4. (Original) The method of claim 1, wherein the delay value is one symbol, wherein the one symbol represents approximately 512 time domain samples.

5. (Original) The method of claim 1, wherein the delay value comprises a predetermined time symbol value.

6. (Currently Amended) The method of claim 1, wherein [[NEXT]]near-end crosstalk (NEXT) interferences due to handshake tones are reduced.

7. (Currently Amended) The method of claim 1, wherein [[FEXT]]far-end crosstalk (FEXT) interferences due to handshake tones are reduced.

8. (Currently Amended) The method of claim 1, wherein the steps are performed at a [[CPE]]customer premises equipment (CPE) end.

9. (Currently Amended) The method of claim 1, wherein the steps are performed at a [[CO]]central office (CO) end.

10. (Original) The method of claim 1, wherein the prediction signal is generated by a causal filter.

11. (Original) The method of claim 10, wherein the causal filter uses historical

data to generate the prediction signal.

12. (Original) The method of claim 10, wherein the causal filter uses at least one past disturbance signal to generate the prediction signal.

13. (Currently Amended) The method of claim 1, wherein the step of ~~minimizing~~ reducing is performed by at a least mean square algorithm.

14. (Original) The method of claim 1, wherein the input is correlated to a disturbance signal.

15-28. (Canceled)

29. (Currently Amended) A system for reducing interference due to handshake tones in the frequency domain, the system comprising:

an input for receiving an input signal in the frequency domain having a short correlation time component and a long correlation time component;

a delay module for generating a delayed signal by delaying the input signal by a delay value; and

a filter for generating a prediction signal based at least in part on the delayed signal;

wherein the input signal and the prediction signal are compared and a variance between the input signal and the prediction signal is ~~minimized~~ reduced.

30. (Currently Amended) The system of claim 29, wherein the input signal is a corrupted frequency domain [[ADSL]]Asymmetric Digital Subscriber Line (ADSL) signal at a predetermined bin of a predetermined time-symbol.

31. (Original) The system of claim 29, wherein the delay value is a time-symbol value.

32. (Original) The system of claim 29, wherein the delay value is one symbol, wherein the one symbol represents approximately 512 time domain samples.

33. (Original) The system of claim 29, wherein the delay value comprises a predetermined time symbol value.

34. (Currently Amended) The system of claim 29, wherein [[NEXT]]near-end crosstalk (NEXT) interferences due to handshake tones are reduced.

35. (Currently Amended) The system of claim 29, wherein [[FEXT]]far-end crosstalk (FEXT) interferences due to handshake tones are reduced.

36. (Currently Amended) The system of claim 29, wherein the system resides at a [[CPE]]customer premises equipment (CPE) end.

37. (Currently Amended) The system of claim 29, wherein the system resides at a ~~[[CO]]~~central office (CO) end.

38. (Original) The system of claim 29, wherein the prediction signal is generated by a causal filter.

39. (Original) The system of claim 38, wherein the causal filter uses historical data to generate the prediction signal.

40. (Original) The system of claim 38, wherein the causal filter uses at least one past disturbance signal to generate the prediction signal.

41. (Currently Amended) The system of claim 29, wherein the variance is ~~minimized~~ reduced by a least mean square algorithm.

42. (Original) The system of claim 29, wherein the input is correlated to a disturbance signal.

43-56. (Canceled)

57. (New) A system comprising:

means for receiving an input signal in the frequency domain having a short correlation time component and a long correlation time component;

means for generating a delayed signal by delaying the input signal by a delay value;

means for generating a prediction signal based at least in part on the delayed signal;

means for comparing the input signal and the prediction signal; and

means for reducing a variance between the input signal and the prediction signal.